



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,778	11/18/2002	Bryan Metts	30GF-9121 (14983-75)	2412
23465	7590	12/04/2008		
JOHN S. BEULICK C/O ARMSTRONG TEASDALE, LLP ONE METROPOLITAN SQUARE SUITE 2600 ST LOUIS, MO 63102-2740			EXAMINER HO, DUC CHI	
			ART UNIT	PAPER NUMBER
			2419	
			NOTIFICATION DATE	DELIVERY MODE
			12/04/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USpatents@armstrongteasdale.com

Office Action Summary

Application No.

10/065,778

Applicant(s)

METTS ET AL.

Examiner

DUC C. HO

Art Unit

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite. It is unclear as to how "remote devices" should be understood in the limitation "providing a means for wireless radio frequency communications between the PLC and a plurality of remote devices", lines 5-6? Is there an association between the remote devices and the PLC? The same remark applies to claim 7, 9 and 15 for wireless devices.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the APA, in view of Schmidt (US 7,058,040).

Regarding claim 1, the APA discloses a programmable logic controller (PLC) wireless communication system 10-fig.1.

providing a central processing unit (CPU) configured for a programmable logic controller (PLC) including a PLC module bus for coupling at least one PLC module to the CPU (a CPU (not shown) configured for PLC is mounted on the CPU card 14-fig.1 for coupling at least one PLC module bus (not shown) so that the CPU could communicate with at least one PLC module 16-fig.1, see par. 0015);

the CPU is mounted on a backplane of a rack (the CPU (not shown) mounted on the CPU card 14 on a backplane 12-fig.1 of a rack);

The APA, however, does not expressly teach (1) a means for wireless radio frequency communications between the PLC and a plurality of remote devices, and (2) the means and the CPU communicate without using the PLC module bus.

One skill in the art would recognize the advantage of employing a means i.e. such as a Bluetooth transceiver, for wireless radio frequency communications. When the Bluetooth transceiver is combined with the CPU of the PLC-fig.1, the modified CPU & Bluetooth transceiver could communicate between the PLC and other remote PLC devices, and thus providing the CPU a capability of wireless communication with a

module connectors 16-fig.1 without using the PLC module bus other module connectors belonging to another backplane within a rack.

Schmidt discloses channel interference reduction. The wireless device 100-fig.2A is a Bluetooth transceiver, see col. 5, lines 38-46.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the APA with Schmidt.

The suggestion/motivation for doing so would have been to provide wireless capability to the CPU in order to communicate with module connectors without using the PLC module bus, and for communication with other module connectors that belong to another backplane within a rack wirelessly.

Therefore, it would have been obvious to combine the APA with Schmidt to obtain the invention as specified in claim 1.

Regarding claims 2, and 20, as discussed in claim 1, the Bluetooth device 100-fig.2A of Schmidt is to be mounted on top of the CPU and the CPU's card 14-fig.1 of the APA.

Regarding claims 3, 11, and 16, in Schmidt the device 100-fig.2A provides a Bluetooth protocol transmitter/receiver, see col. 5, lines 38-46.

Regarding claims 4, 12, and 17, in Schmidt the module 106-fig.1 provides and IEEE 802.11 protocol transmitter/receiver, see col.6, lines 28-34.

Regarding claims 5, 13, and 18, in Schmidt the device 100-fig.2A provides a cellular protocol transmitter/receiver, see col. 5, lines 38-42.

Regarding claims 6, 14, and 19, in the APA the CPU (not shown) mounted on the CPU card-fig.1 constitutes a Network Interface Unit.

Regarding claim 7, this claim has similar limitations as claim 1. Therefore, it is rejected under the APA-Schmidt for the same reasons set forth in the rejection of claim 1. In the APA-Schmidt the PLC devices are capable of transmitting/receiving messages to/from a PLC.

Regarding claim 8, the claimed limitations are discussed in claim 1. The CPU of the APA and the Bluetooth device 100-fig.2A of Schmidt are both mounted on a CPU card 14-fig.1 of the APA.

Regarding claim 9, this claim has similar limitations as claim 1. Therefore, it is rejected under the APA-Schmidt for the same reasons set forth in the rejection of claim 1.

Regarding claim 10, in the APA, the CPU communicates with a module connector 16-fig.1 connected to the backplane via a not shown PLC module bus.

Regarding claim 15, this claim has similar limitations as claim 1. Therefore, it is rejected under the APA-Schmidt for the same reasons set forth in the rejection of claim 1.

Regarding claim 21, please see the rejection of claim 1. The Bluetooth device 100-fig.2A of Schmidt mounted on the CPU-fig.1 of the APA could be configured in a rack that includes a power supply, a CPU board, and a controlled input/output module.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 7, 9 and 15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

/DUC C HO/

Primary Examiner, Art Unit 2419

11-26-08

